Forest Development Plan Mapping Guide

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Forest Development Plan Mapping Guide

TABLE OF CONTENTS

I) PREAMBLE: v
II) INTRODUCTION: vi

PART 1 GENERAL SPECIFICATIONS 1

1) FOREST DEVELOPMENT PLAN - SPATIAL DATA STANDARDS OVERVIEW: 1
2) MANUALLY PRODUCED MAPS: 1
3) ARC INFO DIGITAL DATA FILES 2
3.1 ARC_INFO General Specifications: 2
3.2 Deliverables and Media Specifications: 5
4) IGDS DIGITAL DATA FILES 6
4.1 Digital Cartographic Standards: 6
4.2 IGDS Format - Digital Content: 6
5) PARAMETERS FOR SUBMITTING DIGITAL ATTRIBUTE (TABULAR) FDP DATA: 6

PART 2 DETAILED SPECIFICATIONS 8

6) COVER MAP 8
7) CONSOLIDATED PLANS: 8
8) CODE REFERENCES 9
8.1 Map Legend 9
8.2 Period of Harvest: 9
8.3 Cutblock Label: 9
8.4 Forest Cover: 9
8.5 Mapping Features: 10
8.7 Public Utilities: 11
8.8 Log Handling: 11
8.10 Road Deactivation: 12
8.11 Management Areas: 12
8.12 Watersheds: 13
8.13 Government Approved Experimental trials: 13
8.14 Higher Level Plan: 13
8.15 Recreation Areas: 14
8.16 Terrain Hazard and Stability mapping in Community watershed: 14
8.17 Range Developments: 14

PART 3 USING THE GUIDE 15

9) STARTING UP: LOCATION OF THE FILES 15
10) SOURCES OF MAP INFORMATION : 16
APPENDIX 1 17
11) BIBLIOGRAPHY: 18

i) PREAMBLE:

The Operational Planning Standardization Team (OPST) would like to thank all those involved with the creation of the Forest Development Plan (FDP) template. This template was formed through a series of workshops and conference calls attended by the OPST members with participation by a large group of observers and advisors. The OPST consists of representation from MOF, MELP and Industry on a Province-wide basis. Manuals, maps, and previous FDP formats from Forest Districts throughout the Province helped in giving direction to this project. This template was finalized after a one month Province wide FDP Peer Review.

This document is intended to assist those preparing and submitting a Forest Development Plan for review and approval by the appropriate Government Agencies.

This is the first official release of the Provincial FDP template. Every reasonable effort has been taken to incorporate District specific FDP issues and concerns into the template. There may still be some mapping elements and symbology that are not represented in this template. These items should be gathered at the District level for submission for future revisions to this template, and future mapping initiatives such as INCOSADA.

One of the goals associated with the standardization of FDP submissions, is increased efficiencies for all FDP proponents, reviewing government agencies, and Statutory Decision Makers (SDM's). Towards this goal, the template will be revised over the next year to achieve a more efficient, and fully digital submission from plan proponents. This submission format will be "GIS ready" for better analysis and reporting functionality. Future enhancements will include the following: ARC INFO mapping standards, Microsoft Access tables, together with a published submission specification for tabular data. It is important to note that the new revised format will include the same data requirements and final hard copy appearance of this current template. There will not be any additional requirements for plan proponents in order to use the new format. The revision is meant to provide standards for other digital software packages currently in use around the Province. Conversion from one format to another will not be required under this initiative.

ii) INTRODUCTION:

The FDP spatial specifications in this template were developed by, and in consultation with, Industry and Government representatives from October 1996 to June 1998. The template conforms to the most recent amendments to the Forest Practices Code of British Columbia Act and the Operational Planning Regulation (OPR).

The following Forest Development Plan Mapping Guide is intended as a reference for plan proponents submitting FDP mapping and/or text/tabular information in digital format. It should provide guidance and clarity to the requirements of the Forest Act, and Forest Practices Code of British Columbia. It is not the intent of this document to mandate the submission of digital only information. Plan proponents have the option of submitting information either in digital form, hard copy, or any combination of the two, thus allowing maximum operational flexibility. The digital specifications in this document and the template itself replace any and all previous standards for FDP mapping created prior to June 15, 1998.

To develop the mapping specifications for the template, the OPST team identified the key objectives of standardizing FDP maps as follows:

- Identical appearance and depiction of elements on the maps for presentation to the general public.
- Standard formats for licensees who submit plans to more than one Forest District.
- Increased efficiencies in the capturing and transferring of digital data between FDP proponents and reviewing agencies.
- To avoid redundancy and duplication of information between the tabular and mapping portions of an FDP wherever possible.

The guiding principle for capturing and representing the data used in the mapping of a Forest Development Plan can be summarized with the following statement:
"Utilize the best information available at the time of preparation, in order to meet the requirements of the Forest Practices Code, and the OPR."

PART 1 GENERAL SPECIFICATIONS

1) Forest Development Plan - Spatial Data Standards Overview:

This document details the spatial files and general process of producing a Forest Development Plan (FDP) in the Province of British Columbia. It provides a step by step procedure, documents the plotting configuration file, and outlines the different Microstation/Maps-3d files. **It does not exclude the use of any particular mapping or GIS software package.**

- All mapping produced using these specifications shall conform to the British Columbia Geographic System of mapping (B.C.G.S) as defined by the Ministry of Environment publication entitled "British Columbia Standard System of Mapping, 1976." The Ministry of Forests "Forest Resource Inventory Geographic System," and the "British Columbia Specifications and Guidelines for Geomatics, Content Volume 3, Digital Base Mapping at 1:20 000 Release 2.0 January 1992."
- Field assessments that are to be submitted with the Forest Development Plan should be based on the applicable Resources Inventory Committee (RIC) standards. RIC Manuals are available from either Forest Views, or the MOF website *http://www.for.gov.bc.ca/ric/index.htm*
- The Forest Practices Guidebooks are available from *http://www.for.gov.bc.ca/tasb/legsregs/fpc/fpcguide/guidetoc.htm*
- For digital map files submitted in formats other than the standard BCGS mapsheet tiles, the proponent and the MOF should discuss, and agree on naming conventions for the mapsheets and digital file names.

2) Manually Produced Maps:

Forest Development Plan maps can be produced and submitted as hand coloured maps, or in other non digital formats. In order to maintain a similar appearance between digital and hand coloured maps, the suggested colour markers to use are the TRIA pantone system by Letraset. These markers are available through Pac Blue Reprographics 1-888-642-7222 or any Graphic Art store. The markers are refillable and come in a variety of colours, and each pen comes with both a fine and wide tip. The specific colour pen for each mapping element is outlined in the attached specification table. The symbols shown in the symbology file (Project.XLS). in the Appendix gives a good representation as to the size and colour of each required symbol and colour fill.

3) ARC INFO Digital Data Files

The Arc/Info version of the template is not available at present, but is under development for later release. Once a full Arc/Info digital specification including feature codes (FCODE) and other pertinent specifications is completed and released, it will be located at:

http://www.env.gov.bc.ca/gis

or alternately at the full FDP site at:

http://www.for.gov.bc.ca/ftp/branches/business_design/external/!publish/web/fdptemplate/

If you are already submitting ARC/INFO Export files, Albers Equal Area, NAD 83 then follow the following interim guidelines:

http://www.env.gov.bc.ca/gis/new/Standard for Developing Digital Data Specifications document (MSWord,271KB)

3.1 ARC_INFO General Specifications:

3.1.1 Standards:

- Coverages must be registered to NAD83 Datum. If existing data is NAD27, datum shift must be done by ARC/INFO, using the Canadian National Transformation matrix for NAD27 to NAD83 conversion.
- Accuracy must be within +/- 10m for all known information, through differential GPS, or delineation on hard copy 1:20,000 scale TRIM maps.
- Projection must be Albers Conical Equal Area projection with parameters as defined at *http://www.env.gov.bc.ca/gis.*
- Coverages must include projection definitions (i.e. .prj with coverage).
- All features must be given feature codes (FCODE) according to BC Environment standards available at *http://www.env.gov.bc.ca/gis/featurecodes.html.*
- All coverages must be named according to the BC Environment standards, as defined in this document.
- For attribute items in the feature attribute table or related tables, mandatory means that the values must be included for all records. Optional means that the values are to be filled in when the information is available or the contract specifies it. All attribute tables must have all of the defined items in the scheme by type and width specified, whether or not there are values in the optional items.
- An optional format of .dbf (dBASE) structures may also be used for attribute data.

- Metadata must be defined with each coverage delivered. The structure of meta data information files {covername.meta} is defined in the GIS web page. The .meta file contains 2 items:

  key (c 16)
  value (c 100)

  Each meta file must contain the following information:

KEY	*VALUE*
TITLE	short name for this coverage
DESCRIPTION	brief description of the feature
SOURCE	identify source of the information
ACCURACY	specify to what level of accuracy the data was captured
TOPOLOGY	identify whether polygon, linear or point
PROJECT	project name
CONTRACT_NAME	contractor's name, or company name
CONTRACT_MON	name of contract monitor
DELIVERY_DATE	date of delivery
CAPTURED_BY	name of individual or company who digitized/captured data

3.1.2 Tolerances:

- 1 metre co-ordinate precision must be maintained (7 significant digits).
- Line work from digital TRIM maps should be digitally copied, **not re-digitized** - **Note:** when a line is copied from TRIM to another coverage, its original feature code (FCODE) should be copied in to a new item SRC_FCODE, so that its original use in TRIM can be maintained.
- Points must be snapped (with zero tolerance) to TRIM water features - **Note:** it is impossible to do an exact snap to a single-precision line between vertices. Due to mathematical rounding, the snapped point will not fall exactly on an angled line.
- Transfer of lines and points from photo must be +/- 10m of location of photograph (i.e.-use photographs of 1:20 000 scale or larger).
- Pseudo nodes should be removed unless crucial to data representation or are due to a system limitation.
- All digitized mapping will be carefully registered to within 0.004 relative mean square (RMS) of the corners of TRIM mapsheets. Data co-ordinates will adhere to the standards of storage, datum and projection specified above. Air photos to be digitized will be registered using 1:50 000 NTS maps showing flightlines and photo centres for tendered air photo contracts.
- All feature attribute tables (i.e. .pat and .aat) must be defined exactly as in the appropriate section of this document. 'C' refers to type character, and 'I' to type integer. The input and output width must be defined as indicated. All Arc/Info generated items, (i.e. area, perimeter, cover-#,) are to be left in original state. Additional items specified are to be added IN ORDER SPECIFIED after the last item.
- Linear features must be topologically "clean". All lines must be broken where they intersect, and line endpoints must meet exactly (zero tolerance) at intersections. The arc/ARC INFO BUILD ARC command must be used to build linear topology, and must run without errors or warning.
- Polygons must have complete and clean topology. The Arc/Info BUILD POLY command must be used to build polygonal topology and must run without errors. NODEERRORS must report 0 dangling nodes. LABELERRORS must report no label errors, with the exception of polygon 1, which may be reported to have 0 label points. The coverage shall contain no arcs that have the same polygon on both sides (no unclosed polygons or dangles).
- Point features must have verified topology, and BUILD POINT used to build point topology without errors.

3.2 Deliverables and Media Specifications:

3.2.1 Spatial Data:

The spatial data coverage's and related information files (where necessary to preserve a one to many relationship between point occurrences and observations) to be delivered are:

- Meta data information files should be named as {covername}.meta i.e. T092K023.meta. The covername must match exactly. When the ARC export command is used, this information file will be contained in the export file. Additionally, delivery as an ascii text file may be desirable to facilitate review.
- The spatial data digital files are to be delivered in the following format:
  - ARC/INFO export format with no compression and capable of being imported into ARC/INFO v7.1
  - Exported coverage files must be named in the format "*coveragename*.e00"
  - Related attributes files (i.e. FDZI) are to be exported as "infoname.e00"
- The media for delivery is to be one of:
  - network/Internet ftp
  - CD ROM
  - or other format agreed to in advance by regional staff

3.2.2 Attribute Data:

1) DBASE or INFO

Note MELP has its own ODBC Standards for attribute data. Refer to:
http://www.env.gov.bc.ca/isb/oracle_data/oraconfig.html
and
http://www.env.gov.bc.ca/isb/standards/orastd.html

3.2.3 Coverages

The coverage must have polygonal topology verified. (Region and Routes may be an option.)
Delineate the area under the FDP (boundary or sub-basin) on TRIM hard copy maps, carefully matching across map sheet edges. Digitize the polygon within the above defined tolerances and specifications for polygonal topology.

4) IGDS Digital Data Files

4.1 Digital Cartographic Standards:

The map legends and sample maps were created using MicroStation 95 based on IGDS standards at 1:20,000. At this point the digital files are structured for 2D, and are currently being redesigned for 3D. A Maps-3D database project is available as part of this FDP template. Digital map files must follow the following specifications:

- 3D IGDS format Universal Transverse Mercator Co-ordinate System.
- NAD27 where FC1 is NAD27, NAD83 where FC1 is NAD83. MOF Districts will provide a listing of the NAD status by mapsheet of the FC1's.
- Geo-referenced with the Global Origin set to standard working units (km), sub units (m) and positional units (mm). Global origin =-4, 5296, -2147.483648 (z-value only with a 3D file).
- **The smallest recommended scale for hard copy plotting is 1:20 000.**

4.2 IGDS Format - Digital Content:

- Text nodes - All Cut blocks must be coded with a text node both in the digital graphics file, and in the "MS Word" tabular section of the document to enable linking.
- All polygons must close, (i.e. topologically correct,) and each polygon must contain only one text node with label.
- All polygons relevant to the current Five Year Forest Development Plan must be present and noded in the digital block file (such as donut holes representing Wildlife Tree Patches, swamps etc.)
- Elements are vector and poly clean.
- Elements coded according to attached symbol and INCOSADA feature codes standards.
- MOF will provide the necessary cell libraries and feature codes.
- The Right Hand rule applies.

DO NOT USE Microstation Custom Line Styles if you are transferring any digital FDP data to the MOF or MELP offices. Neither Maps3d or Arc/Info is able to recognize and/or utilize Microstation Custom Line styles.

5) Parameters for Submitting Digital Attribute (Tabular) FDP Data:

- MOF will provide an Access database for use at the option of the plan proponent in the near future. Proponents are requested to populate the database and submit it to the statutory decision maker(s) - Excel based spreadsheets are available as an option in the interim. The plan proponent may submit paper or electronic MS Word format text/tabular information.
- A comprehensive list of the digital map files within the licensee's development plan should be submitted for tracking of data submissions.

The media for delivery is to be one of:

- network/Internet ftp, *http:\\www.for.gov.bc.ca/ftp:*
- CD ROM
- 3.5" floppy disks

Colorado 250/350 QI, C(Quarter Inch Cartridge).

Please contact the Ministry of Forests District office for the specific medium required.

PART 2 DETAILED SPECIFICATIONS

6) Cover Map

A cover map at an appropriate scale of 1:250,000 to 1:600,000 must be supplied if the proposed plan is a multiple map plan. This map must show the following;

- Planimetric base- this will depend on the method used to create this map, (NTS or TRIM), but it should include cities, towns, Indian Reserves, lakes, river, mountain peaks and highways, etc.…
- Existing operating boundaries
- Timber processing or manufacturing facilities
- Has a legend detailing the base map symbology.
- Any other information the proponent believes is necessary in submitting the forest development for comment, review and approval. (E.g., a higher level plan.)

Note: Higher Level plans are generally produced at 1:250,000 or 1:50,000 scale and may be included on this map.
Note: Some companies include a small key map on the right bottom corner of the legend on their maps. This is an optional feature.

7) Consolidated Plans:

The following information is a general guide. For those districts that currently have a consolidated plan, please see their local consolidated plan requirements.

The MOF will endeavour to provide the maps and digital "Source Information" that will enable the licensees to have a common base to develop their FDP submission, specifically;

- A TSA Status Map that satisfies this FDP requirement for all licensees (i.e.1:300,000)
- A seamless digital reference file with the features that flow from the status maps through to the FDP maps. This will include the approved Forest Development Plan for all licensees from the previous year, and where completed, the Archaeological Overview Assessment information. (This will be provided as IGDS, NAD 27/83, UTM Zone 7-11), or (ARC/INFO Export files, Albers Equal Area, NAD 83.)
- Text nodes - All cut blocks must be coded with a text node that is a **unique identifying number,** (unique for the entire Forest District,) both in the digital graphics file, and in the excel spreadsheet to enable linking. Each Licensee in each Forest District should be assigned number blocks for text nodes.

Licensees are requested to submit:

- A Forest Development Plan (document/tables/maps) to the standards of this template.
- Two IGDS or ARC INFO Forest Development Plan' map files for their operating areas by district. A 'Cut Block' file, and a 'Roads' file.

8) Code References

The following section references the symbology of the legend to the Act and Regulations. Sections pertain to the Operational Planning Regulation (OPR), unless otherwise stated.

8.1 Map Legend

- Title: Forest Development Plan	business requirement
- Period of the plan	Section 10, Act, Section 3,

8.2 Period of Harvest:

- Category A cutblocks - Proposed	Section 18(1)(q), Section 20(1)
- Category I cutblocks	Section 19 (1)
- Expedited Major Salvage Blocks	business requirement
- TSL / Cutting Permit, awarded/approved	Section 18 (1)(r)(ii)
- Partial Cutting systems	Section 20(1)(b)(iii)

Note:

1) *Partial cut silvicultural systems such as seed tree will be hatched to distinguish them from clearcut harvest system.*
2) *All the cutblocks have an outline and fill that are on separate levels.*

8.3 Cutblock Label:

- Company name	business requirement
- Year of harvest if critical	Section 20(1)(b)(i)
- Cutting Permit or Licence #/cutblock number	Section 18 (1)(r)

Note: *The company name (abbreviated) has been included in the label as a business need, to facilitate the production of consolidated plans and to explain neighbouring licensee's adjacent cutblocks.*

8.4 Forest Cover:

- Forest Cover	Section 18 (1)(a)
- Greened-up	Section 18(1)(s)

Note: *The Code requires that the plan indicate the location of cutblocks harvested but not yet greened-up, and adjacent to proposed or approved category A cutblocks. This may be done using one of two methods. First, dividing harvested not yet greened-up cutblocks into: Harvested NSR, and Harvested SR.. It was considered*

a business requirement to distinguish satisfactorily restocked areas from not-satisfactorily restocked areas. With this method, greened-up adjacent cutblocks, use the Forest Cover - Inventory label, and are the white base map colour (not colour filled) in order to reduce map clutter.

The second method uses the Harvested NSR symbol of the primary legend file and the colour filled greened-up symbol in the Optional Symbols file. Discuss with district staff which method to use.

- Harvested & Not Satisfactorily Restocked (NSR)	Section 18 (1)(s), business requirement
- Satisfactorily Restocked (SR) and not greened-up	Section 18 (1)(s), business requirement
- Satisfactorily Restocked and greened-up	business requirement
- Forest cover (timber typeline)	Section 18(1)(a)
- Contour Index (definite) - TRIM	Section 18(1)(b)
- Contour Index intermediate (indefinite)	Section 18(1)(b)

Default contour interval is 20 meters.

Note:

1) *The base map standard is the Ministry of Forests 1:20,000 Forest Cover digital files and Inventory label. If you are a licensee that uses your own base and label, please substitute it in here.*
2) *The base map contour standard is the Terrain Resource Inventory Mapping TRIM1 or TRIM2 1:20,000 digital files. If you don' t have TRIM in your plan area use field surveyed contour data.*

8.5 Mapping Features:

- Dam and Dyke	business requirement
- Swamp and Marsh	Section 18(1)(b)
- Microwave towers	Section 18(1)(f).
- Mine, Pits, Rock, Rock Quarries	business requirement
- Wells; gas/oil/water	business requirement
- Well with pump	business requirement, Section 20(1)(a)(iii)

Note: *Many of these features are on TRIM maps.*

8.6 Streams and Wetlands:

- Streams and Wetlands	Section 18(1)(b)
- Riparian Stream Class, S1 - S4, Fish	Section 18(1)(e)(xiii)

This includes fish streams within community watersheds.

- Riparian Stream Class, S5 - S6, No Fish	Section 18(1)(e)(xiii)

- Community Watershed Streams, No Fish (NS1 - NS4)	business requirement
- Fish Habitat Inventory Unclassified fish stream	Section 18(1)(e)(xii)
- Fish Habitat Inventory Unclassified no-fish stream	Section 18(1)(b)
- Unclassified streams definite and indefinite	Section 18(1)(b)
- Unclassified wetlands	Section 18(1)(b)
- Unclassified Lake	Section 18(1)(b)
- Riparian Wetland Class	Section 18(1)(e)(xiii)
- Riparian Lake Class	Section 18(1)(e)(xiii) & (xiv)

Note:

1) *Unclassified stream, wetland, lake line work is from the original forest cover base map. This line work will include areas outside of your area of riparian assessment.*
2) *Fish Habitat Inventory stream data (is based on interpreted computer slope gradient <20% fish bearing streams or Department of Fisheries escapement records or field testing). See references for Fish Habitat digital map file Internet site. Terrain resource inventory maps are also a source of stream information.*

8.7 Public Utilities:

- Transmission Lines	Section 18(1)(f)
- Pipeline (oil/gas)	Section 18(1)(f)
- Pipeline (water)	Section 18(1)(e)(xi) & 20(1)(a)(iii)
- Railway	Section 18(1)(f)

Note:

1) *Public Utilities includes transmission lines, gas and oil pipelines, and railways. Private utilities and minor supply lines are not included.*
2) *These features are available from the Ministry of Forests maps 1:20 000, TRIM 1 & 2 maps and the Surveyor General maps.*

8.8 Log Handling:

- Dryland Sort Water Sort, Log dump	Section 18 (l)(iv)
- Mill Site	Section 18 (l)(iv)
- Helicopter log and balloon log drop area	Section 20(1)(b)(ii)

Note: *Log handling dumps or processing plants should be shown on a key map, if not presented on the FDP base maps.*

8.9 Access Management:

Bridges - Permanent, Temporary	business requirement
MOF and TRIM standard cartographic symbol	
- Bridges- proposed Temporary	Section 18(1)(k)
- Bridges- proposed Permanent	Section 18(1)(k)
- Culverts (major), existing, temporary or permanent	business requirement
- Riparian Class of Stream	Section 18(1)(m)
Is required when a bridge or major culvert is proposed for replacement or new construction.	
- Highway	Section 18 (1)(l)(iv)
- Secondary Road -Public	Section 18(1)(l)(iv)
Highway and Public road symbology is a TRIM and Ministry of Forests base map cartographic standard.	
- Road (existing)	Section 18(1)(l)
- Road label	business requirement
- Seasonal use only road	Section 18 (1)(l)(iii)
- Road barrier - temporarily or permanent	Section 18 (1)(p)
- Road barrier- Proposed (temporary or permanent)	business requirement
- Category I roads	Section 19(2)
- Road construction/modification, proposed	Section 18(1)(h)

Note:

1) *Road Maintenance, Section 18(m) Roads that are to by the person under the plan are to be either indicated using a map notation or via a list.*
2) *This includes labelling Forest Service Roads and roads under permit.*

8.10 Road Deactivation:

- Temporary deactivation (current)	Section 18 (1)(n)(ii)
- Temporary deactivation, proposed	Section 18 (1)(n)(iii)(iv)
- Semi-permanent deactivation (current)	Section 18 (1)(n)(ii)
- Semi-permanent deactivated, proposed	Section 18 (1)(n)(iv)
- Previous year's permanent deactivation	Section 18(1)(n)(i)
- Permanent deactivation proposed	Section 18 (1)(n)(iv)

Note: *The map should show the highest level of deactivation in the first three years of the plan. For road sections with multiple levels of deactivation in the three year period, complete the Interim Road Deactivation table.*

8.11 Management Areas:

- Cultural Heritage	Section 20(1)(a)(i), Act S51
- Designated Areas	Section 18 (1)(e)(ii)

- Ecological Reserve — business requirement
  Surveyor General base map, cartographic standard.
- Forest Ecosystem Networks (approved) — Section 18(1)(e)(vi)
- Indian Reservations — Section 20(1)(a)(ii)
- Legal Lot — Section 20(1)(a)(ii)
- Old Growth Management Areas — Section 18 (1)(e)(vii)
- Operability Line — Section 18 (1)(d)
- Plus Tree — Section 20(1)(a)(i)
- Private property — Section 20(1)(a)(ii)
- Protected Areas and Parks — Section 18 (1)(e)(i)
- Scenic Area — Section 18 (1)(e)(viii)
- Special Use Permit — business requirement
- Ungulate Winter Range — Section 18 (1)(e)(ix)
- Wilderness Area — Section 18 (1)(e)(iii)
- Wildlife Habitat Areas — Section 18 (1)(e)(v)
  Do not map wildlife habitat areas unless permission has been granted by the statutory decision makers.
- Wildlife Tree Patches — Section 18(1)(u)
  This applies to established wildlife tree patches, > 1 ha, and where map scale facilitates reasonable depiction.

8.12 Watersheds:

- Licensed domestic water supply intakes — Section 20(1)(a)(iii)
- Community watershed boundary — Section 18 (1)(e)(x)
- Community watershed supply intake — Section 18 (1)(e)(xi)

8.13 Government Approved Experimental trials:

- Growth and Yield Plots — Section 20 (1)(a)(i)
- Operational Trials — Section 20 (1)(a)(i)
- Research Installation — Section 20 (1)(a)(i)
- Snow Course — Section 20 (1)(a)(i)

Note: *These features are found on the Ministry of Forest's, Forest Cover maps which are available from each district and for purchase from BC ONLINE.*

8.14 Higher Level Plan:

- Landscape Unit — business requirement
- Resource Management Zone — business requirement
  Enhanced, general, and special refers to different zones based upon the emphasis of resource development and extraction as outlined in the RMZ document.
- Sensitive area point and boundary — Section 18 (1)(e)(iv)
  These also include Marine sensitive zones

8.15 Recreation Areas:

- Recreation: sites, features, trails	Section 20 (1)(a)(i)

8.16 Terrain Hazard and Stability mapping in Community watershed:

- High likelihood of landslide, class V	Section 18 (1)(c)(i)
- Moderate likelihood of landslide, class IV	Section 18(1)(c)(i)
- Terrain stability, unstable	Section 18 (1)(c)(ii)
- Terrain stability potentially unstable	Section 18 (1)(c)(ii)
- Soil erosion potential	Section 18 (1)(g)
- Terrain slope gradient > 60%	Section 18(1)(c)(iii)

Note: *Terrain label: There are two labels for terrain mapping. The base label presented here, and the RIC standard found in the Optional Symbol file. This second label is the standard for field assessment data. The Forest Practices Code does not require all the features in the RIC standard label for the forest development plan. A condensed version on the RIC standard terrain label is shown on the map legend. Either label is acceptable to be used on the map, at the plan proponent's discretion.*

8.17 Range Developments:

- Range Development, various symbols	Section 20(1)(a)(i)

Note: *Range Development has numerous feature symbols. Include only the feature symbols on the map legend that you have in your district. Coastal districts for the most part do not have range features, so the category should not be included on the legend.*

PART 3 USING THE GUIDE

9) STARTING UP: LOCATION OF THE FILES

The FDP files are located on the following FTP site for your download:

http://www.for.gov.bc.ca/ftp/branches/business_design/external/!publish/web/fdptemplate/

Either log on the Internet or your FTP server. If you are using FTP then log on as anonymous first.

All mapping files are MicroStation files but they can be sent to your plotter directly even if you don't have MicroStation. All you need is a plotter. Set your plotter merge software on. Type at the DOS prompt c:\copy map_all.000 lpt1: Use your own lpt port which may or may not be configured for a plotter: insure that it is linked to your plotter and that your plotter is ready for the plot (.000) and other files.

It is suggested that the design files be used as a starting point. These files should be copied and renamed to your own map Legend name and then referenced to your working file. These files can then be amended to local requirements. In the event that the Forest Practices Code may have future changes these will be reflected in the Legend.dgn. A referenced file can be easily changed, rather then each working file in a project.

10) Sources of Map Information :

The following is a list of source information that the proponents may use to construct their FDP maps.This list will continue to grow as Higher Level Plans, and new inventories are created throughout the province. As more mapping information becomes available, and is updated on a steady basis the number of reference files will also change. We have endeavoured to make a complete list at this time.

- All data has to adhere to Resource Inventory Committee (RIC) Standards:
  http://www.for.gov.bc.ca/ric/index.htm

- B.C. Environment is currently developing a web site to provide all of the applicable source data. The list will include provincial and regionally specific data sources with appropriate contacts. Refer to the Forest Development Plan web page:
  http://www.env.gov.bc.ca/gis

- Digital Data Specifications Standards, Resource Inventory Committee, Digital Data Working Group Version 1.0 November 03, 1997
  http://www.env.gov.bc.ca/gis/new/Standard for Developing Digital Data Specifications document (MSWord,271KB)

- Land Data B.C., Terrain Resource Inventory Mapping (TRIM)
  B.C. Online 1-800-663-6102 **for purchase:**
  http://www.env.gov.bc.ca/gis/trimcont

- Ministry of Forests, Forest Cover Maps 1:20,000 available for data share and purchase:
  http://www.for.gov.bc.ca/

- The Forest Practices Code Forest Development Plan Guidebook December 1995:
  http://www.for.gov.bc.ca/tasb/legsregs/fpc/

- The Forest Practices Code Operational Planning Regulation Revision April 3/1998:
  http://www.for.gov.bc.ca/tasb/legsregs/fpc/

- The British Columbia Specifications and Guidelines for Geomatics Vol. 3 , Digital Baseline Mapping at 1:20,000 – January 1992:
  http://www.for.gov.bc.ca/ric/index.htm

- The British Columbia Specifications and Guidelines for Geomatics Vol. 4 , Digital Baseline Mapping at 1:5,000/1:2,500 - November 1991:
  http://www.for.gov.bc.ca/ric/index.htm

- Forest Road Management System, Engineering Working Group Information Package Revised October 14,1997:
  http://www.for.gov.bc.ca/

- Forest Road Regulation Revised April 3,1998:
  http://www.for.gov.bc.ca/tasb/legsregs/fpc/

- Fisheries and Oceans Canada, Fish Habitat Inventory & Information Program Interactive Fish maps:
  http://habitat.pac.dfo.ca./heb/fhiip

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